Engineering Services & Supplies Pty Ltd
Phone 1 800 074446
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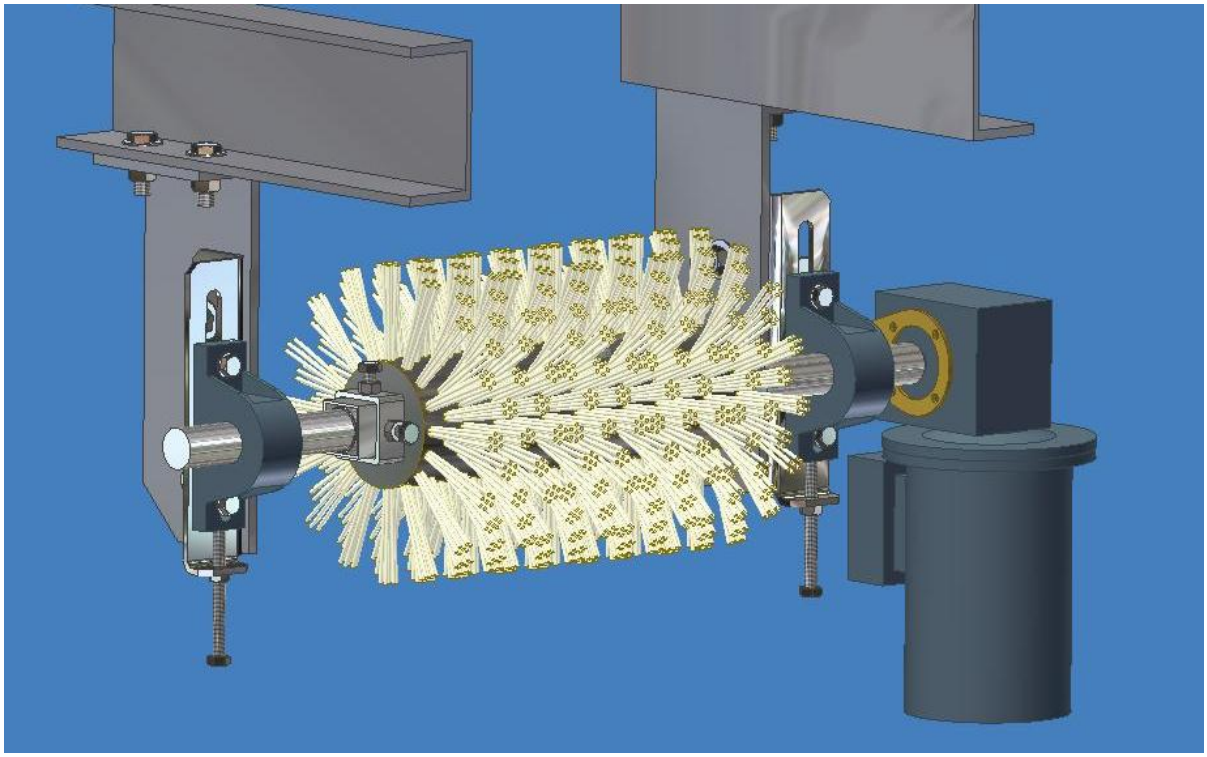
The *ESS* Brush Cleaner



SAFE WORKING PROCEDURES (SWP)
INSTALLATION MANUAL

MARTIN ENGINEERING

Revision	Description of Change	Changed By	Date
A	Added Final Checklist	AS	28/5/07
B	Bearing information updated on drg F0258; Added Warranty Reg. & Hazards List.	GC AS	19/10/07
C	Added IP rating information on drg F0172 and F0258.	CW	23/01/09
D	Updated Melbourne Address & Removed SA Address	SH	3/08/09
E	Final Checklist Updated Items 4 & 5 Reversed	SH	15/04/10

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TOLL FREE FROM ANYWHERE IN AUSTRALIA

WARRANTY NOTE

ESS* WARRANTS** the ***ESS* Product** to be free of defects both in materials and workmanship for a period of 12 months from the date of despatch of the product from the ***ESS factory. The warranty given by ***ESS*** in this regard will extend only to replacing or repairing product shown to be defective.

The warranty also is subject to the following restrictions:

(a) Installation of the product contrary to the instructions contained in the supplied manual will void such warranty absolutely;

(b) The warranty will not extend to any liability for injuries incurred and which result from the use of the product contrary to the instructions in the manual;

(c) Save as prescribed by law, ***ESS*** will not be liable for any damage sustained by a purchaser or a third party by way of consequential loss arising out of defects in the product.

You are asked to note that ***ESS*** offers purchasers a service whereby either:

(a) It will install the product and certify the correctness of such installation, or

(b) Certify the correctness or otherwise of the installation of the product by third parties.

This certification service is designed to ensure that you obtain the full benefit of the ***ESS*** warranty hereby provided. If you would like to take advantage of the installation certification service provided, please contact ***ESS*** regarding the service.

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ESS ENGINEERING SERVICES AND SUPPLIES PTY LTD
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Information contained herein is for use in the operation of the ***ESS* Brush Cleaner** Conveyor Belt Cleaner, purchased from ***ESS*** and cannot be passed on to any other party without express permission, in writing, from ***ESS***.

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SECTION 1 - SAFETY

The ***ESS*** **Brush Cleaner** Conveyor Belt Cleaner is designed to be quickly and easily serviced by appropriate personnel.

Under no circumstances should servicing or installation of the cleaner be carried out whilst the belt is in operation. Under no circumstances should servicing or maintenance of the cleaner be carried out whilst the **Brush Cleaner** is in operation.

The conveyor must be shut down and locked out before any person enters or reaches into the conveyor enclosure. The ***ESS*** **Brush Cleaner** must be shut down and locked out before attempting any maintenance or adjustment.

Ensure that only suitably qualified and trained personnel install and service this product. Ensure that all site and statutory safety procedures are followed.

Electrical connections to the ***ESS*** **Brush Cleaner** must be carried out by a suitably qualified and licensed electrical tradesperson, and must comply with all appropriate Australian and site electrical and safety standards.

Hazards that may be present when installing this equipment:

	Hazard		**Hazard**
X	Moving Conveyor - ISOLATE		Other:
	Hot Work		Other:
	Working at Heights		Other:
	Heavy Lift		Other:
	Persons Working Overhead		Other:
	Persons Working Below		Other:
	Electrical & Cabling		Other:
	Pinch Points		Other:
	Trip Hazards		

Once hazards have been identified, the installer should undertake and document a comprehensive Job Hazard Analysis according to site requirements and good safe-working practice.
The installer must identify all hazards and apply appropriate controls before proceeding with the installation of this equipment.

SECTION 2 - INTRODUCTION

The ***ESS*** **Brush Cleaner** is a motorized rotary brush designed for use as a cleaning device for conveyor belts. It is normally located on the return side of the conveyor belt, as close as possible to the head pulley so that material brushed from the belt is delivered into the conveyor chute.

The ***ESS*** **Brush Cleaner** rotates against the direction of belt travel at a speed of approximately 280 rpm.

The ***ESS*** **Brush Cleaner** is often used as a secondary cleaner, and is preceded by a primary cleaner such as the ***ESS*** Trac-mount, Durt Tracker or XHD primary cleaners.

The ***ESS*** **Brush Cleaner** has 100 mm wide segments so that the same spare part can be used for all belt widths. The brush is available with a range of bristle materials and thickness.

SECTION 3 - PREPARATION FOR INSTALLATION

1. CHECK INSTALLATION DRAWINGS - Ensure that you have the correct drawings and equipment for your conveyor(s).

2. PRE-ASSEMBLE THE CLEANER(S) AND MOUNTS - Do this in your workshop or similar free area, rather than at the Conveyor. This will enable you to:

- verify all required equipment is present
- familiarise yourself with the cleaner assembly
- allow you to plan the installation, reducing installation time.

3. ASSEMBLE THE NECESSARY TOOLS & SAFETY EQUIPMENT REQUIRED FOR THE INSTALLATION

4. OBSERVE THE CONVEYOR WHILE RUNNING AND CONVEYING MATERIAL -

- Observe the belt splice condition
- Does the belt run true, or track off to one side?
- Is the Head Pulley out-of-round?

Consult ***ESS*** if any **UNUSUAL** conditions are observed in the above. These conditions may result in recommendation of a different installation position or even a different cleaner.

SECTION 4 - INSTALLATION

DANGER! Conveyor must be shut down and locked out before installation is performed.

WARNING! If installation is to be done in an enclosed area, test atmosphere for gas level or dust content. Follow all welding and safety guidelines.

Protect belt surface from weld spatter with appropriate shield.

NOTE For installation on enclosed head pulley chute work, draw all dimension lines on chute wall. In applications where head pulley is not enclosed, use the best available field resources and/or methods to ensure that these critical dimensions are followed for a proper installation.

4.1 Installation on Open Framed Conveyors

Where the ***ESS*** **Brush Cleaner** is to be installed on an open framed conveyor, or in an area away from the chute enclosure, the following installation steps should be followed:

Step 1

Determine the installation position for the ***ESS*** **Brush Cleaner**. This should be on a flat area of the return belt, and preferably in a position where the material removed from the belt will be captured and delivered onto the next conveyor, receiving hopper or the like. Mark the vertical centre line of the brush on the conveyor stringers or structure.

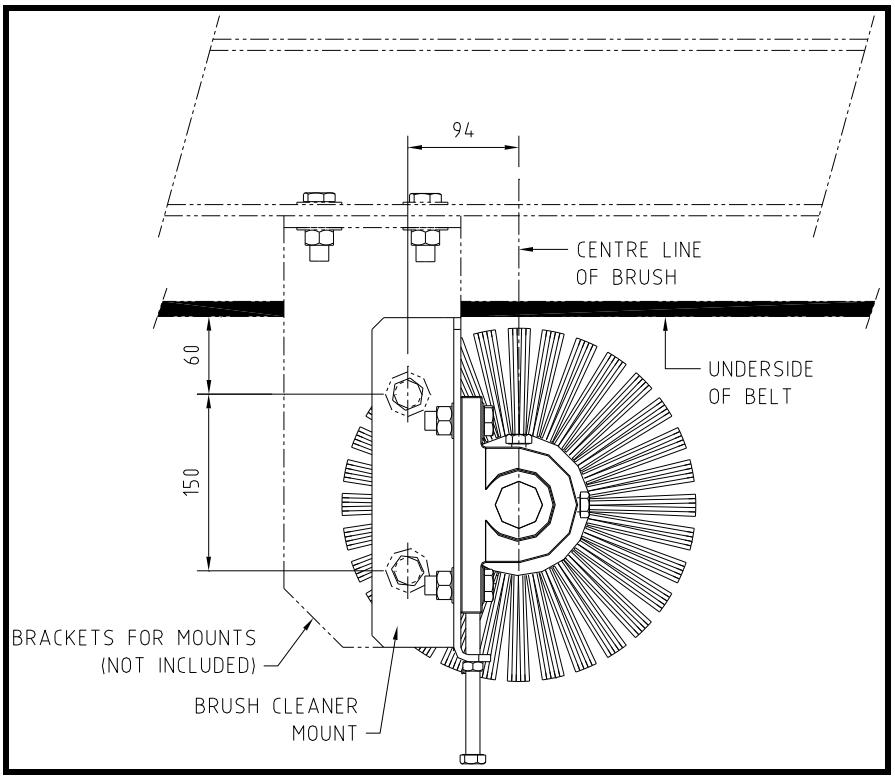
Note: For conveyors that are inclined, the brush centre line is not vertical, but will be perpendicular to the belt line.

Step 2

Measure 94 mm one side of the brush centre line, and mark another line, which represents the centre line of the mount bracket holes. The mount bracket can be either side of the brush – in other words, the mount brackets can be on the leading or trailing side of the brush, but must be the same on both sides of the conveyor.

Step 3

Fabricate suitable brackets to attach the **Brush Cleaner** mounts to the conveyor stringers. The upper holes of the **Brush Cleaner** mounts should be 60 mm below the underside of the conveyor belt. See figure below. The non-drive side brackets must be easily removable (bolted) for future brush segment replacement.



Step 4

Attach the **Brush Cleaner** mounts to the fabricated brackets as shown. Ensure that the mounts are perpendicular to the conveyor belt, and that the adjusting screw is at the bottom of the mounts. Tighten the M16 bolts securing the mounts to the brackets.

Step 5

Assemble the brush segments to the cleaner mainframe, and fit the lock each side. Centre the segments on the square tube, and secure the locks. Fit the bearing assemblies to each end of the mainframe, with the securing grub screws outwards. Do not tighten the grub screws at this point.

Step 6

Lift the mainframe and brush assembly into place, and attach to the mounts by bolting the bearing housings to the slots in the mounts. Fit the torque arm anchor bracket to the drive side mount, positioning it on the opposite side of the mount bracket to the bearing housing, and sharing the bearing housing fasteners. With the bolts in the bottom of the slots, the top of the brush should be approximately 10 mm clear of the underside of the belt. Lightly tighten the bolts securing the bearing housings. Centre the brush segments to the belt by sliding the mainframe through the bearings. Tighten the grub screws securing the bearings to the shaft.

Step 7

Fit the geared motor drive unit over the stepped end of the mainframe shaft. Ensure that the key is in place and aligned with the keyway before applying necessary force to fit the drive unit. Ensure that the torque arm is in place and aligned with the anchor bracket for the required motor orientation. The drive can be rotated to several positions, but the torque arm must be first repositioned so that it aligns with the anchor bracket.

Step 8

Depending on the model, the torque arm anchor will be a length of threaded rod, or later a folded steel bracket.

For the rod model, ensure that a nut and washer are fitted each side of the torque arm. Adjust the inner nut until the washer is contacting the torque arm. Adjust the outer nut until the washer contacts the torque arm, and then use spanners to tighten both nuts against the torque arm.

For the steel bracket model, fit the smaller bracket to the slots in the larger bracket using fasteners supplied. Ensure that the smaller bracket is on the inside, or away from the drive unit, and that the hole in the small bracket aligns with the hole in the torque arm. Attach the smaller bracket to the torque arm using the single bolt supplied, and tighten securely. Tighten the bolts securing the smaller bracket to the larger bracket.

The *ESS* Brush Cleaner is now installed and ready for electrical connection.

4.2 Installation on Enclosed Conveyor Chutes

Where the ***ESS*** **Brush Cleaner** is to be installed on an enclosed conveyor chute, the following installation steps should be followed:

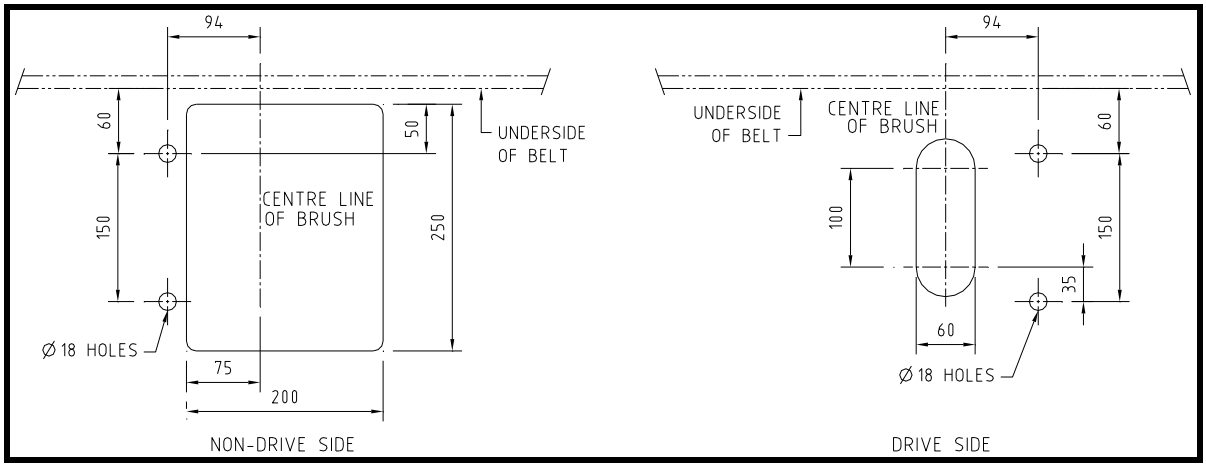
Step 1

Determine the installation position for the ***ESS*** **Brush Cleaner**. This should be on a flat area of the return belt, and preferably in a position where the material removed from the belt will be captured and delivered onto the next conveyor, receiving hopper or the like. Determine by measuring the position of the conveyor belt, and mark this on the outside of the conveyor chute enclosure. Mark the vertical centre line of the brush on the conveyor chute enclosure. Repeat both sides of conveyor.

Note: For conveyors that are inclined, the brush centre line is not vertical, but will be perpendicular to the belt line.

Step 2

Using the marked centre lines and belt line, and the figure below, mark out the chute cut-outs. Ensure that the correct cut-out is marked for the Drive and Non-Drive sides of the cleaner. Future maintenance work will be most frequently performed at the Non-Drive side, so this side should have the best access. Ensure there is sufficient room for the drive unit on the side nominated as the Drive side.



Note: The cleaner mounts can be either side (leading or trailing) of the brush, but must be the same both sides.

Step 3

Fit the bearing units to the **Brush Cleaner** mounts using the bolts supplied. Ensure that the grub screws on the bearing hub are outward from the mounts, and that the bearing units are at the adjusting screw end of the slots in the mounts. Fit the Drive side mount and bearing assembly to the chute using the bolts supplied. Ensure that the correct side mount is used, and that the adjusting screw is at the bottom.

Step 4

Assemble the brush segments to the cleaner mainframe, and fit the lock each side. Centre the segments on the square tube, and securely fasten the Drive side lock only. Remove the Non-Drive side lock and the brush segments. Insert the shaft and lock stepped end first into the Non-Drive side cut-out, through the Drive side cut-out, and through the bearing on the Drive side mount. Ensure that the stepped end of the shaft is on the Drive side.

Step 5

Supporting the shaft, fit the brush segments onto the Non-Drive end of the shaft, and push them through the chute cut-out – the brush bristles will distort to fit through the smaller opening. Fit all of the segments, ensuring that the furthest segment is in contact with the Drive side lock. Fit the Non-Drive side lock, and secure.
Fit the Non-Drive side mount and bearing assembly to the shaft, and attach to the chute using the bolts supplied. With the bearing housings positioned in the bottom of the slots in the mounts, the brush bristles should be approximately 10mm clear of the underside of the belt.

Step 6

Remove the nuts securing the Drive side bearing housing and fit the torque arm anchor bracket to the drive side mount, positioning it on the opposite side of the mount bracket to the bearing housing, and sharing the bearing housing fasteners. Re-fit the nuts and lightly secure. Centre the brush segments to the belt by sliding the mainframe through the bearings. Tighten the grub screws securing the bearings to the shaft.

Step 7

Fit the geared motor drive unit over the stepped end of the mainframe shaft. Ensure that the key is in place and aligned with the keyway before applying necessary force to fit the drive unit. Ensure that the torque arm is in place and aligned with the anchor bracket for the required motor orientation. The drive can be rotated to several positions, but the torque arm must be first repositioned so that it aligns with the anchor bracket.

Step 8

Depending on the model, the torque arm anchor will be length of threaded rod, or later a folded steel bracket.

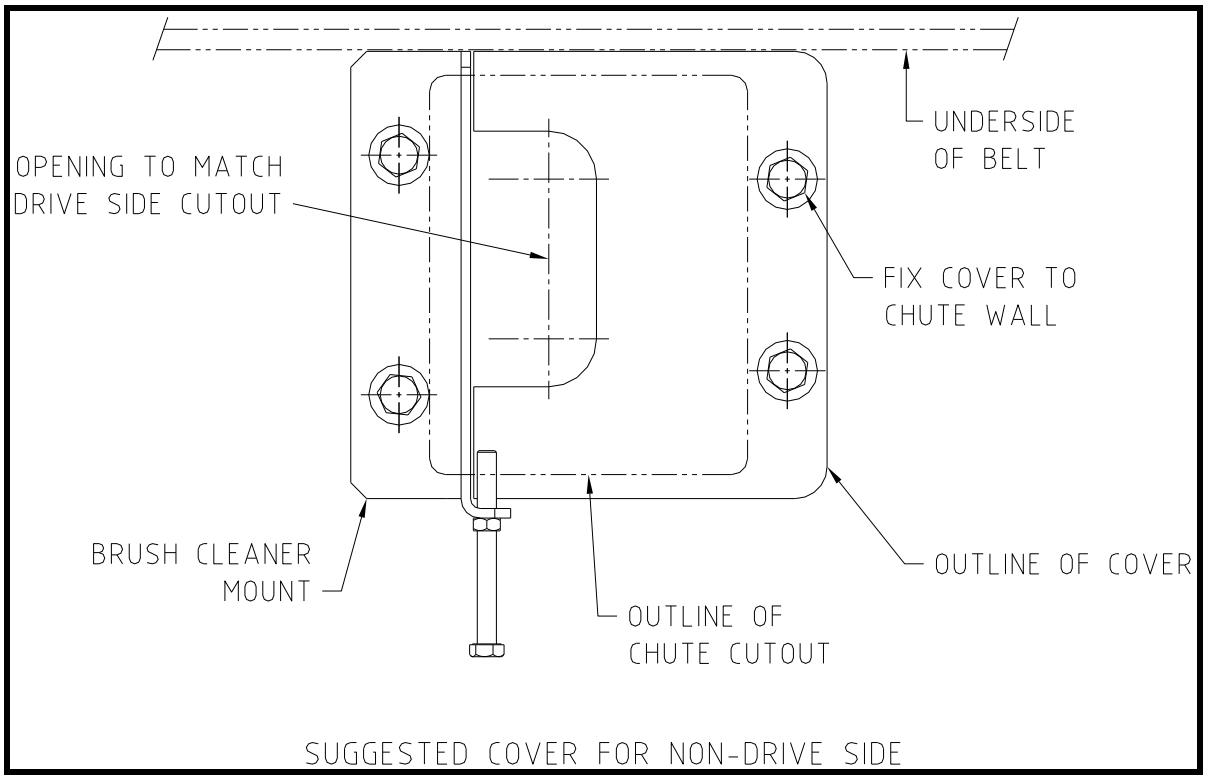
For the rod model, ensure that a nut and washer are fitted each side of the torque arm. Adjust the inner nut until the washer is contacting the torque arm. Adjust the outer nut until the washer contacts the torque arm, and then use spanners to tighten both nuts.

For the steel bracket model, fit the smaller bracket to the slots in the larger bracket using fasteners supplied. Ensure that the smaller bracket is on the inside, or away from the drive unit, and that the hole in the small bracket aligns with the hole in the torque arm. Attach the smaller bracket to the torque arm using the single bolt supplied, and tighten securely. Tighten the bolts securing the smaller bracket to the larger bracket.

Step 9

If required for containment of dust, or to comply with plant safety rules, a cover may be fabricated and fitted to the chute opening, especially on the non-drive side.

The cover must be easily removable for inspection of the brush, and must allow for vertical adjustment of the brush shaft. A typical cover is shown below.



The *ESS* Brush Cleaner is now installed and ready for electrical connection.

SECTION 5 – ELECTRICAL CONNECTION AND CONTROL

CAUTION

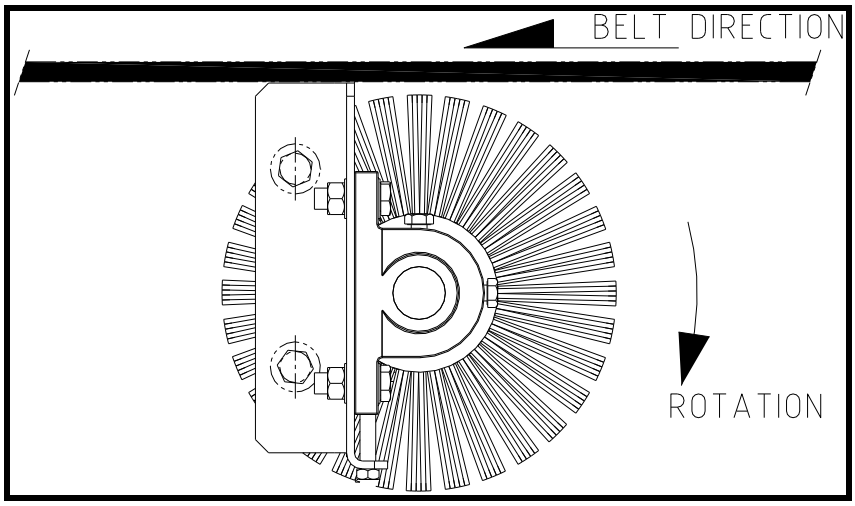
The ***ESS*** **Brush Cleaner** is a motorised brush, with the motive power supplied by a 3-phase electric motor. The drive motor must be connected in accordance with all site and statutory regulations, and only by a licensed and appropriately trained electrical tradesperson.

Ensure that all power sources are isolated when working on or connecting exposed electrical cabling.

5.1 Control

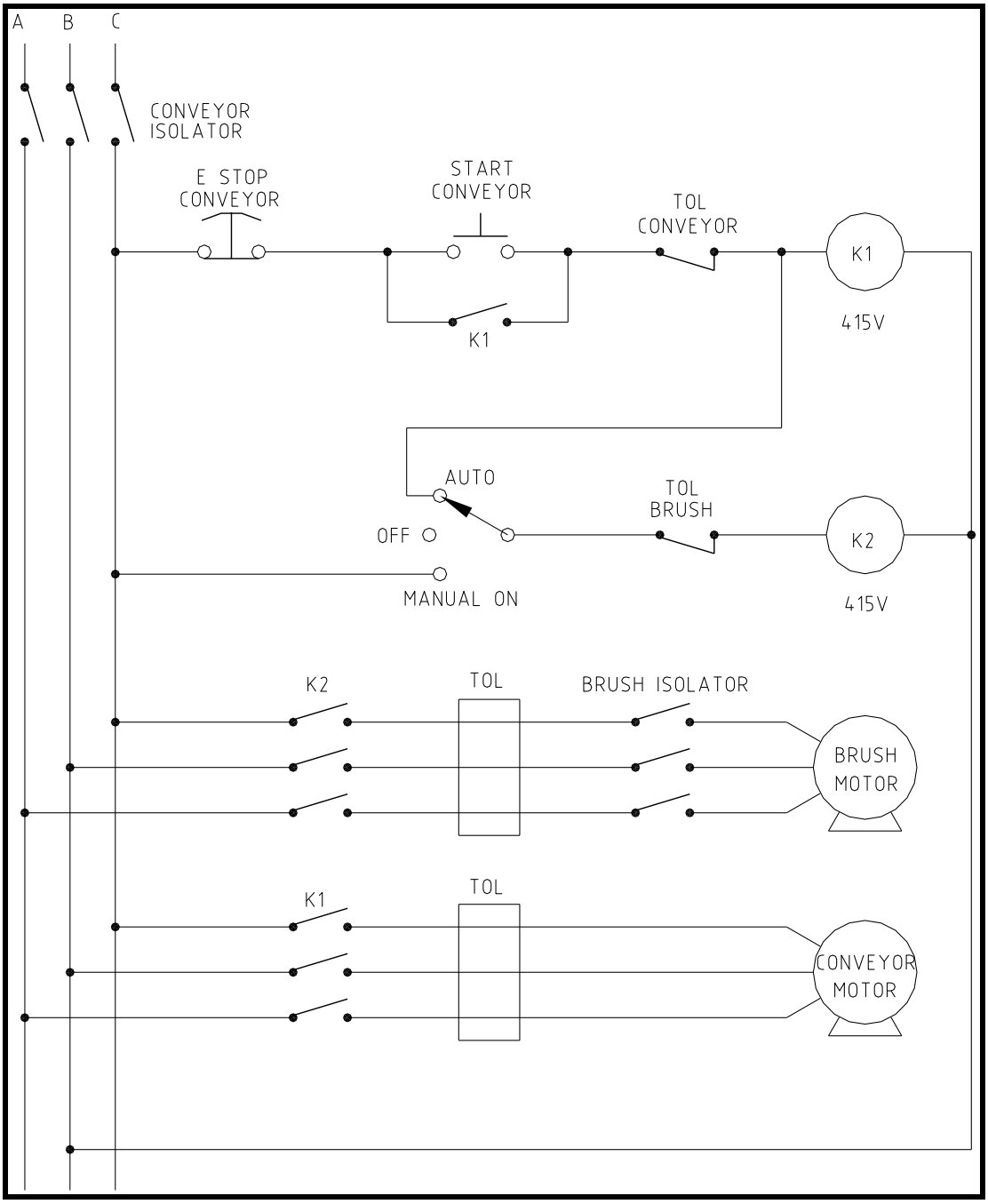
The ***ESS*** **Brush Cleaner** should rotate against the direction of the conveyor – see figure below. The ***ESS*** **Brush Cleaner** should be interlocked with the conveyor drive so that it operates only when the conveyor operates.

A safety isolation switch should be located adjacent to the **Brush Cleaner** drive unit. A conveyor emergency stop or pull wire should be located adjacent to the **Brush Cleaner** on both sides of the conveyor. Stopping the conveyor should automatically stop the ***ESS*** **Brush Cleaner**.



Additionally, the ***ESS*** **Brush Cleaner** may be connected with a selector switch that allows automatic starting of the cleaner whenever the conveyor starts, but also allows manual starting and stopping of the cleaner for maintenance and adjustment without the conveyor running.

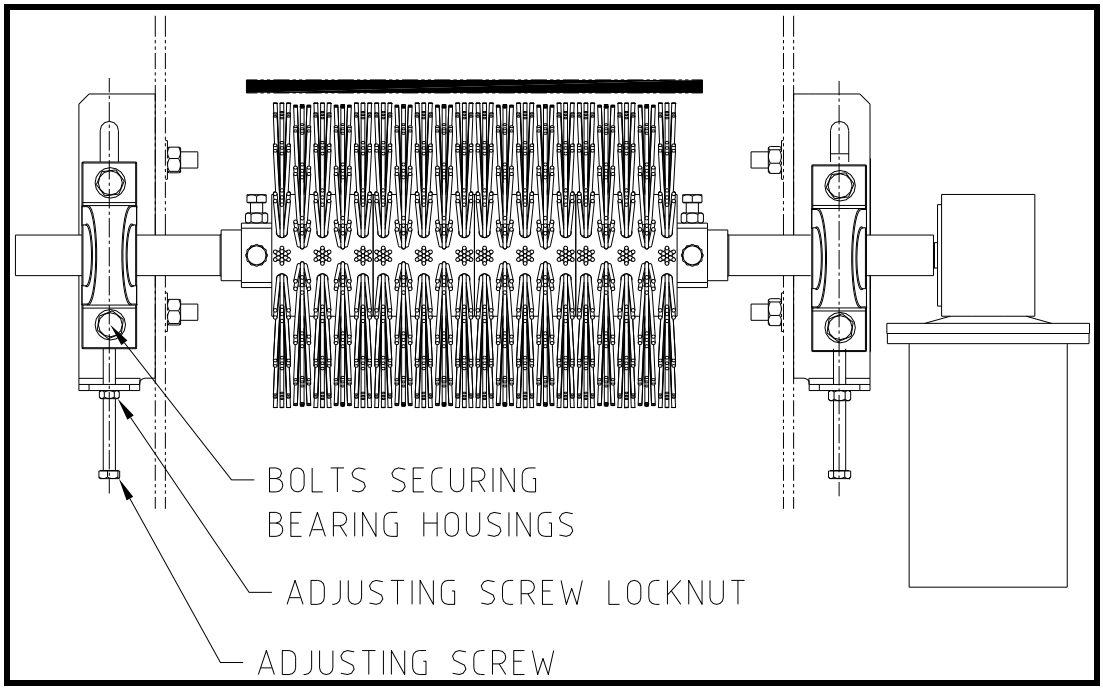
A typical control circuit is shown below.



SECTION 6 – COMMISSIONING

6.1 Description

Once the ***ESS*** **Brush Cleaner** has been electrically connected and tested, it can be adjusted for service. The ***ESS*** **Brush Cleaner** utilises jacking screws to adjust the brush to the belt.



6.2 Adjustment Procedure

- Slightly loosen the bolts securing the bearing housings to the mounts to just allow the housing to slide. Repeat for both sides. Ensure that the Torque Arm bracket remains in place on the drive side.
- Loosen the locknuts on the adjusting screws at the lower end of each support bracket.
- Turn the adjusting screw (equally on both sides) until the brush bristles are just touching the belt. The drive and torque arm assembly will automatically be adjusted via the anchor bracket.
- Ensure that the bristle contact is equal across the belt – that is, the bristles are just touching across the belt width.
- Continue turning the adjusting screw equally on both sides approximately 3 mm, or two turns. Do not over-adjust – the cleaning is done by the tips of the bristles, and excessive adjustment will result in poor performance and high wear.
- Re-tighten the bolts securing the bearing housings to the mounts, and tighten the locknuts on the adjusting screws.
- Start the conveyor and the ***ESS*** **Brush Cleaner** and observe the cleaning action of the brush. Ensure that the brush rotates smoothly against the belt with no vibration.
- Observe the belt surface after the ***ESS*** **Brush Cleaner** – is the brush cleaning the full belt area? If the belt surface is excessively worn, and the brush does not make full contact, allow a period of time (say 1 week) for the brush to wear to the belt profile, and then adjust two more turns of the screw.

SECTION 7 – ROUTINE MAINTENANCE AND SERVICE

Regular inspection and servicing is the key to effective conveyor belt cleaning. It is recommended that the cleaner be inspected once per week initially. Actual service intervals will vary considerably from plant to plant.

CAUTION! **DO NOT REACH INSIDE THE CONVEYOR CHUTE UNDER ANY CIRCUMSTANCES WHILST THE CONVEYOR IS RUNNING.**

BEFORE ATTEMPTING ANY MAINTENANCE OR SERVICE WORK ON THE *ESS* BRUSH CLEANER, SHUT DOWN AND LOCKOUT BOTH THE CONVEYOR AND THE *ESS* BRUSH CLEANER.

7.1 Routine Inspection

The following tasks should be undertaken during a routine inspection.

- Observe the conveyor belt after the ***ESS* Brush Cleaner**. Is the belt being cleaned uniformly? If the conveyor shows streaking or uneven cleaning, it may indicate that adjustment or brush segment replacement is required.
- Inspect the ***ESS* Brush Cleaner** drive unit. Ensure that the shaft is rotating smoothly. Check for noise or vibration.
- Check that all fasteners are secure.
- Check bearings and lubricate if necessary.
- If fitted, and if allowable under site regulations, remove the non-drive side cover plate and visually check the condition of the brush segments and bristles. Ensure that the bristle tips are making good contact with the belt.
- If any problems are identified with the ***ESS* Brush Cleaner** operation, adjustment or the condition of the bristles, arrange for the conveyor to be shutdown and service the cleaner as described below.

7.2 Re-adjustment Procedure

Once the brush bristles wear, readjustment of the cleaner will be necessary.
To readjust the cleaner, refer to the adjustment procedure in the Commissioning Section 6.2.

Begin the re-adjustment by first reversing the adjustment procedure and backing the brush away from the belt by a few millimetres, inspect the bristles, and then follow the adjustment procedure.

7.2 Brush Replacement

Do not attempt service on this cleaner with the belt or the cleaner running. Do not reach into the conveyor enclosure with the belt or cleaner running.

Shut down, lock out and tag the conveyor and the *ESS* Brush Cleaner before attempting any maintenance that requires reaching into the conveyor enclosure.

Step 1 Shut down and lock out the conveyor and the ***ESS* Brush Cleaner** as per site safety rules.

Step 2 To access the brush segments, first fully de-adjust the cleaner by reversing the adjustment procedure as described section 6.2. When adjusting or de-adjusting the cleaners, ensure that this is done evenly on both sides. Alternate sides at each turn of the adjusting rod or use an assistant. If the **Brush Cleaner** is on an enclosed conveyor chute, remove the non-drive side cover (if fitted).

Visually inspect the brush segments and bristles.

- If bristles are clean, and not excessively worn, re-tension the cleaner and return to service.

- If bristles are excessively worn or damaged, proceed.

Step 3 When fully retracted, loosen the grub screws securing the non-drive side bearing to the shaft. Unbolt non-drive side mount and bearing assembly (and bracket for the open conveyor installation) and remove the complete assembly from the cleaner shaft, taking care to support the end of the shaft.

Step 4 Reach in and remove the non-drive side blade lock, sliding it from the shaft. Slide the brush segments individually from the shaft. Worn brush segments should easily fit through the access cut-out. Clean any material build-up from the shaft.

Step 5 Fit new brush segments by sliding them onto the cleaner shaft. The bristles of the new segments will easily bend to fit through the access cut-out. Ensure the new segments are in contact with the drive side lock and each other, then refit the non-drive side lock.

Step 6 Refit the non-drive side bearing and mount (and bracket) assembly, and tighten the grub screws securing the bearing to the shaft.

Step 7 Adjust the brush to the belt as described in section 6.2. Refit the non-drive side access cover.

Step 8 Return the ***ESS* Brush Cleaner** and the conveyor to service.

SECTION 8 – TROUBLE SHOOTING

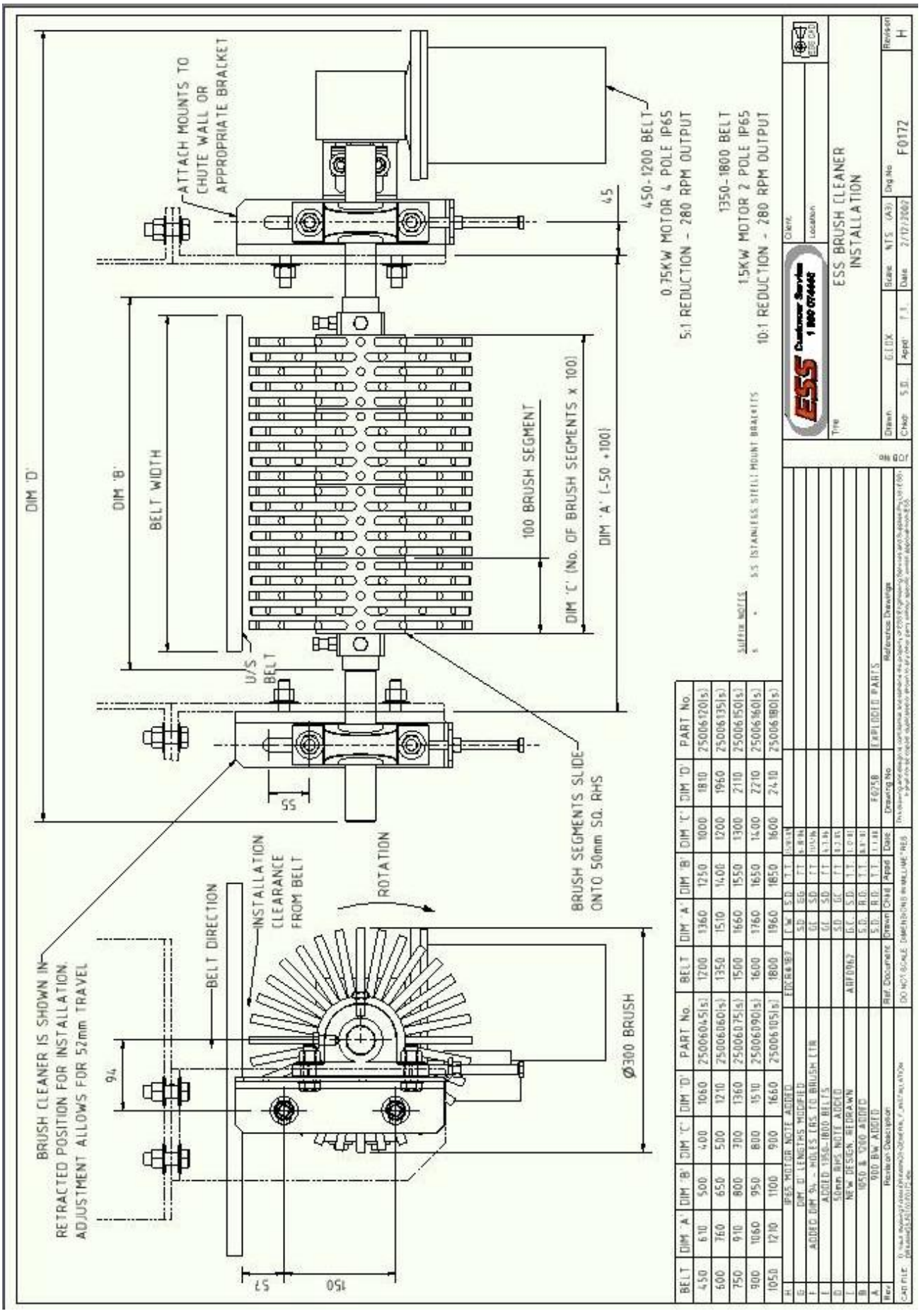
PROBLEM - High brush wear rate.

CAUSE	SOLUTION
Cleaner over-tensioned	Re-tension the cleaner as described in section 6.2.
Incorrect brush material	Contact ***ESS*** for re-appraisal

PROBLEM - Insufficient cleaning - too much carryback.

CAUSE	SOLUTION
Cleaner under-tensioned	Re-tension cleaner as per section 6.2.
Cleaner not rotating in the correct direction.	The cleaner must rotate against the belt travel direction. If incorrect, have an electrical tradesperson change the drive direction.
Build-up on brush	Remove brush segments and clean. Contact ***ESS*** for alternative brush materials.
Primary Cleaner not functioning correctly	Service the Primary Cleaner
Incorrect Brush Material	Contact ***ESS*** for alternative materials
Cleaner overloaded	Add additional cleaner
Cleaner not suitable for product	**Brush Cleaner**s work best on dry powders and stringy dry materials. Excessively wet or sticky materials may cause blinding of the brush and subsequent poor performance. Contact ***ESS***.

SECTION 9 – INSTALLATION ARRANGEMENT DRAWING



BELT	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	PART No.	BELT	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	PART No.
450	610	500	400	1060	250060451(s)	1200	1360	1250	1000	1810	250061201(s)
600	760	650	500	1210	250060601(s)	1350	1510	1400	1200	1960	250061351(s)
750	910	800	700	1360	250060751(s)	1500	1660	1550	1300	2110	250061501(s)
900	1060	950	800	1510	250060901(s)	1600	1760	1650	1400	2210	250061601(s)
1050	1210	1100	900	1660	250061051(s)	1800	1960	1850	1600	2410	250061801(s)

Rev	Description	Drawn	Chkd	Appd	Date
H	0.75KW MOTOR NOTE ADDED	ENGRAVED			
G	DIM 'D' LENGTHS MODIFIED	S.D.	E.G.	T.T.	6.8.04
F	ADDED DIM 'A' — HOLES ERS TO BRUSH CTR	S.D.	S.D.	T.T.	10.5.04
E	ADDED 1350-1800 BELTS	S.D.	S.D.	T.T.	8.7.04
D	50mm RHS NOTE ADDED	S.D.	S.D.	T.T.	8.7.04
C	NEW DESIGN. RE-DRAWN	G.E.	S.D.	T.T.	1.7.01
B	1050 & 1200 ADDED	S.D.	R.D.	T.T.	8.8.01
A	900 Blt ADDED	S.D.	R.D.	T.T.	11.4.01

Ref Documents: ABF0967 — Reference Drawings: F0158 — EXPLODED PARTS

CAD FILE: 0:\cad drawings\solidworks\f0172.sldprt — DO NOT SCALE. DIMENSIONED IN MILLIMETRES

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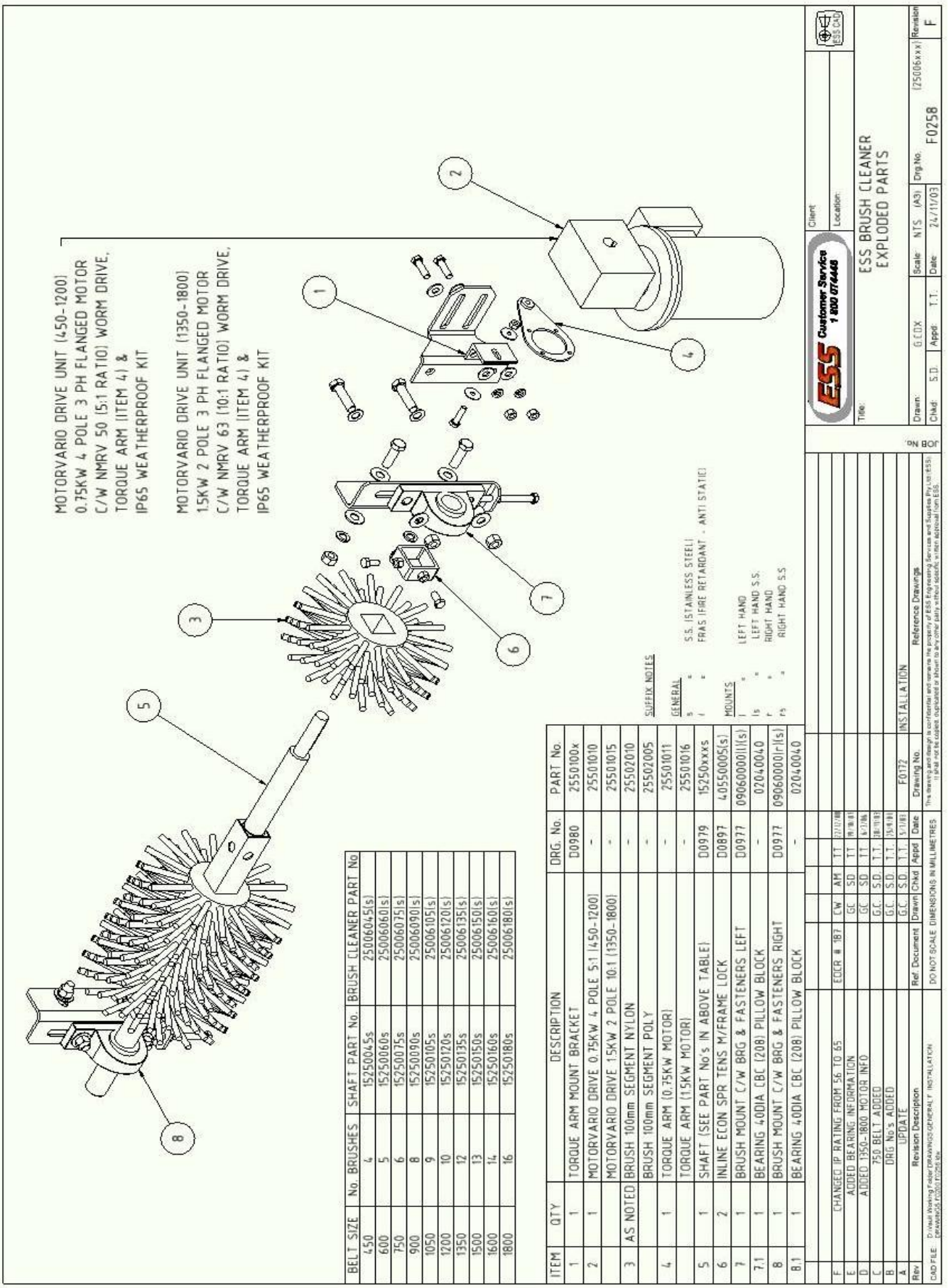
SECTION 10 – EXPLODED PARTS LIST


MOTORVARIO DRIVE UNIT (450-1200)
0.75KW 4 POLE 3 PH FLANGED MOTOR
C/W NMRV 50 (5:1 RATIO) WORM DRIVE,
TORQUE ARM (ITEM 4) &
IP65 WEATHERPROOF KIT
MOTORVARIO DRIVE UNIT (1350-1800)
1.5KW 2 POLE 3 PH FLANGED MOTOR
C/W NMRV 63 (10:1 RATIO) WORM DRIVE,
TORQUE ARM (ITEM 4) &
IP65 WEATHERPROOF KIT
ESS BRUSH CLEANER
EXPLODED PARTS
F0258

BELT SIZE	No. BRUSHES	SHAFT PART No.	BRUSH CLEANER PART No
450	4	15250045(s)	25006045(s)
600	5	15250060(s)	25006060(s)
750	6	15250075(s)	25006075(s)
900	8	15250090(s)	25006090(s)
1050	9	15250105(s)	25006105(s)
1200	10	15250120(s)	25006120(s)
1350	12	15250135(s)	25006135(s)
1500	13	15250150(s)	25006150(s)
1600	14	15250160(s)	25006160(s)
1800	16	15250180(s)	25006180(s)

ITEM	QTY	DESCRIPTION	DRG. No.	PART No.
1	1	TORQUE ARM MOUNT BRACKET	D0980	2550100x
2	1	MOTORVARIO DRIVE 0.75KW 4 POLE 5:1 (450-1200)	-	25501010
		MOTORVARIO DRIVE 1.5KW 2 POLE 10:1 (1350-1800)	-	25501015
3	AS NOTED	BRUSH 100mm SEGMENT NYLON	-	25502010
		BRUSH 100mm SEGMENT POLY	-	25502005
4	1	TORQUE ARM (0.75KW MOTOR)	-	25501011
		TORQUE ARM (1.5KW MOTOR)	-	25501016
5	1	SHAFT (SEE PART No's IN ABOVE TABLE)	D0979	15250xxxs
6	2	INLINE ECON SPR TENS M/FRAME LOCK	D0897	40550005(s)
7	1	BRUSH MOUNT C/W BRG & FASTENERS LEFT	D0977	09060000(l)(s)
7.1	1	BEARING 40DIA CBC (208) PILLOW BLOCK	-	02040040
8	1	BRUSH MOUNT C/W BRG & FASTENERS RIGHT	D0977	09060000(r)(s)
8.1	1	BEARING 40DIA CBC (208) PILLOW BLOCK	-	02040040

SUFFIX NOTES

GENERAL

s = S.S. (STAINLESS STEEL)
i = FRAS (FIRE RETARDANT - ANTI STATIC)

MOUNTS

l = LEFT HAND
ls = LEFT HAND S.S.
r = RIGHT HAND
rs = RIGHT HAND S.S

Rev	Revision Description	Ref. Document	Drawn	Chkd	Appd	Date
F	CHANGED IP RATING FROM S6 TO 65	ECCR # 187	CW	AM	TT	27/11/08
E	ADDED BEARING INFORMATION		GC	SD	TT	19/12/03
D	ADDED 1350-1800 MOTOR INFO		GC	SD	TT	6/12/06
C	750 BELT ADDED		GC	SD	TT	28/11/03
B	DRG No's ADDED		GC	S.D.	T.T.	25/11/03
A	UPDATE		GC	S.D.	T.T.	5/11/03

CAD FILE: D:\Vault Working Folder\DRAWINGS\GENERAL\F INSTALLATION DRAWINGS.IDW

DO NOT SCALE. DIMENSIONS IN MILLIMETRES

INSTALLATION

Reference Drawings

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ESS Customer Service 1 800 074448

Drawn: G.EDX | Scale: NTS (A3) | Drg No. F0258 (25006xxx) | Revision F
Chkd: S.D. | Appd: T.T. | Date: 24/11/03
Title: ESS BRUSH CLEANER EXPLODED PARTS
Client:
Location:

FINAL CHECKLIST

Site:_____ Number: _____ Date:_____

Site Equipment No./Location: _____ Site Contact: _____

Completed By: _____ **(Circle Yes or No Below)**

1. **Was equipment to ESS Specification?** _____ **Yes/No**

   Drawing No. Ref:_____**Attached? Yes/No**

   If No, WHY _____

   _____

   Will this affect performance? Yes/No

   If Yes, WHY _____

   _____

2. **Was this a standard ☐ service ☐ inspection ☐ installation? Yes/No**

   If No, WHY _____

   _____

3. **Was work carried out as per procedure and JSA? Yes/No**

   If No, WHY _____

   _____

4. **Is equipment fit for commissioning? Yes/No**

   If No, WHY _____

   _____

5. **Was a final inspection carried out while plant was running? Yes/No**

   If No, WHY _____

   _____

6. **Has anything changed from previous service / inspection / installation? Yes/No**

   If Yes, WHAT _____

   _____

7. **Is equipment performance to Client expectations? Yes/No**

   If No, WHY _____

   _____

ESS Signature: _____ **Client Signature:** _____

ESS ENGINEERING
SERVICES & SUPPLIES PTY LTD

WARRANTY REGISTRATION FORM

Installer/Purchaser to fill out form & fax or scan/email to
ESS Engineering Services & Supplies Pty Ltd
Fax: 1800 824 446 Email: warranty@esseng.com.au

Company: .....
Site: .....
Contact: .....
Contact Phone: .....
ESS Equipment: .....
.....
Purchase/Delivery Date: .....
Order No.: .....
Installed by: ..... Date: .....
On Conveyor/Equipment No.: .....

NOTE: This Equipment is guaranteed to be free of defects in material and manufacture for a period of 12 months from the date of purchase/delivery.
If the ESS product is found to be faulty, or if any problems are encountered with the equipment, contact ESS on 1800 074 446.